	Application No.	**Applicant(s)**
Notice of Allowability	10/072,971	HARRIS, JOHN M.
	Examiner	**Art Unit**	
	Beth Van Doren	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *communications filed 09/10/2007*.

2. ☒ The allowed claim(s) is/are *1,2,5,7 and 12-14*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some*   c) ☐ None of the:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

         3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

     * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

     (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

         1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

     (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

         Paper No./Mail Date _____ .

     Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

BETH VAN DOREN
PRIMARY EXAMINER
AU 3623

DETAILED ACTION

1.   The following action is a response to the communications of 09/10/2007. Claims 1 and 7

have been amended and claims 3-4 and 8-11 have been canceled. Claims 1-2, 5, 7, and 12-14 are

now pending in this application and are allowed. This action includes examiner's reasons for

allowance

Reasons for Allowance

2.   Claims 1-2, 5, 7, and 12-14 are allowed.

3.   The following is an examiner's statement of reasons for allowance: None of the prior art

of record, taken individually or in any combination, teach, inter alia, **computing a plurality of**

statistical models for a probability of unscheduled component demand, where **each** of the

plurality of computed statistical models includes a **distinct linear combination of variables**

pertaining to component use, and wherein **each** of the computed **statistical models comprises**

an N-erlang distribution wherein the N-erlang distribution includes a parameter λ and for

each component, using the collected historical unscheduled component demand data to **select**

one computed statistical model from the plurality of computed statistical models, **including**

selecting an equation for the parameter λ.

The prior art references most closely resembling the Applicant's claimed invention are

Wetzer (U.S. 6,738,748), Hillier et al. (*Introduction to Operations Research*), Erke et al. (U.S.

2003/0061126), Tegethoff (U.S. 5,539,652).

Erke et al. teaches establishing statistical models using a computer, where a user enters

data to establish and implement a model. The probability of unscheduled component demand is

considered in the established and implemented models using the parameters of time and a failure rate of a component. Data concerning fill rates (or historical demand) is collected and used to fit the established model to the specific data concerning the problem. Thus, the model represents the specific variables and circumstances of the situation at hand. However, Erke et al. does not teach that a plurality of statistical models are computed, each of these models specifically containing a distinct combination of variables and an N-erlang distribution wherein the N-erlang distribution includes a parameter λ. Further, Erke et al. does not teach selecting a previously computed-statistical model from a plurality of models based on collected historical data or calculating a time interval at which the unscheduled component demand is expected to occur.

Tegethoff discloses selecting a previously computed statistical model (a fault model) based on collected historical data and the probability of failure at a time of failure and at a certain confidence interval, and further calculating a time interval for failure. However, Tegethoff does not teach that a plurality of statistical models are computed, each of these models specifically containing a distinct combination of variables and an N-erlang distribution wherein the N-erlang distribution includes a parameter λ. Further, Tegethoff does not teach selecting a previously computed-statistical model from a plurality of models based on collected historical data or calculating a time interval at which the unscheduled component demand is expected to occur.

Next, Wetzer teaches using a set of statistical models to consider the failure rate of components and make determinations concerning unscheduled component demand. The performance of the components is monitored, including unscheduled failures. Based on the performance data, historical demand is determined and used to predict the probability of unplanned failure of a component as a function of time in the future. The component data is used

to select a model that reflects the data. However, Wetzer does not teach that a plurality of statistical models are computed, each of these models specifically containing a distinct combination of variables and an N-erlang distribution wherein the N-erlang distribution includes a parameter λ. Further, Wetzer does not teach selecting a previously computed-statistical model from a plurality of models based on collected historical data or calculating a time interval at which the unscheduled component demand is expected to occur.

Hillier et al. teaches using the statistical model of a Poisson distribution to project the amount of capacity to provide and predict characteristics of a waiting line for the capacity as well as selecting an equation for lambda in the distribution. Lambda represents the mean rate at which the event occurs. Hillier et al. further discloses using an Erlang distribution to model the expected number of demand events occurring at a time in the future. However, Hillier et al. does not teach that a plurality of statistical models are computed and specifically does not teach that each of these models specifically contain a distinct combination of variables and an N-erlang distribution wherein the **N-erlang distribution includes a parameter** λ. Further, Hillier et al. does not teach selecting a previously computed-statistical model from a plurality of models based on collected historical data or calculating a time interval at which the unscheduled component demand is expected to occur.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement for Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is 571-272-6737. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bvd
November 21, 2007

BETH VAN DOREN
PRIMARY EXAMINER